

1630200005 - St. Clair County
Sauget Area 1, Dead Creek
Sediment Containment Cell
Superfund/Technical File

Reviewer: Rob Watson
Review Dates: April 30, 2001

**Response to Comments on Sauget Area 1 TSCA Containment Cell Design Report
Time Critical Removal Work Plan, Dead Creek Sediment and Soil in Sauget and Cahokia**

Introduction

On April 2, 2001, Solutia submitted the Final Sauget Area 1 TSCA Containment Cell Design Report. On April 30, 2001 Solutia received additional comments from IEPA regarding design of the final cover system. The following is Solutia's response to those comments.

COMMENT	EPA/IEPA DISCUSSION OF RESPONSE TO COMMENTS	SOLUTIA RESPONSE
84.	The following comments are related to Comment 84:	
a.	The calculations for Qmax in Appendix D (the first set of calculations under Cover System Stormwater Control) are not legible. A darker copy of these calculations needs to be provided.	A clearer set of calculations are provided to replace the previous unreadable version. Please remove all of Appendix D and insert the attached replacement set.

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b.	It was my understanding that the downchute along the north berm was to be grass with riprap. Figures 5-1 and 5-6 seem to confirm this conclusion. However, the calculations for a concrete downchute are still in Appendix D. Calculations demonstrating that the grass/riprap design can accommodate the flow from a 25-year, 24-hour storm event, and not be subject to excessive erosion, need to be provided in Appendix D. If a concrete downchute will be used, Figures 5-1 and 5-6 need to be revised to show the concrete downchute.	The down chute included in the draft version of the design report has been replaced with two drop structures and HDPE piping to transport stormwater to a grassed lined outlet channel that discharges to Dead Creek. Please remove the existing Appendix D from your report and replace it with the attached.
c.	A detail drawing (like Figure 5-8) of the downchute outlet, and its relationship to Dead Creek needs to be provided. Figure 5-8 is titled "Downchute Outlet Detail," but it is actually the downchute inlet.	The figures in Section 5 were revised to provide the requested details. Figure 5-1 was modified to clarify how the details shown in Figures 5-6 through 5-10 relate to the plan view. Existing Figure 5-8 was renumbered to Figure 5-9. Figures 5-8 and 5-10 were added to provide the detail requested. Please remove Figures 5-1 and 5-8 and inset the attached Figures 5-1, 5-8, 5-9, 5-10. In addition Section 5 was revised to identify the new figures and to clarify the design of the cover system. Please remove the Section 5 text and replace it with the attached.
d.	The responses to Comment 84 in Part II (Item 89) and Part II, Group II (Item 118) need to be revised since they still do not address each portion of the comment individually.	Please see the information provided below.
84. Part II (Item 89) and Part II, Group II (Item	Run-Off Control Systems, Section 5.5: The design of the landfill needs to include a run-off control system that is capable of holding the stormwater from a 25-year, 24-hour storm after the unit is closed. It is not	During construction, stormwater in the cell will be pumped from the cell and discharged to Dead Creek. After sediment transfer, stormwater in the cell will be treated, as required, and discharged to the POTW. Once the cover is installed, sedimentation will be controlled using best management practices. After vegetation is established, there is no need to control

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118)	acceptable to discharge the run-off from the closed landfill directly to Dead Creek. A run-off control system for the closed landfill will prevent sediments from washing off the landfill and into the restored Dead Creek. Also, if the cover system fails, and the run-off becomes contaminated, the run-off control system will prevent the contaminated run-off, sediments and wastes, from entering and contaminating the restored Dead Creek. The description of the run-off control system needs to include the following:	runoff from the cell. Stormwater runoff will be routed to a drainage swale on the north side of the cell that discharges to Dead Creek. Design drawings for this swale, which is designed to handle a 25-year, 24-hour storm, are included in Attachment 25 of this Response to Comments Document. They will be included as Figures 5-1 and 5-6 of the Design Report.
a.	<u>Design and Performance</u> Describe the run-off collection and control system design. Provide calculations demonstrating that the system has sufficient capacity to collect and hold the total run-off volume. Provide a plan view showing the locations of the run-off control system components, along with sufficient drawing details and cross sections. Indicate the fate of the collected run-off.	Section 5.4 describes the cover design and Section 5.5 describes the Run-Off Control Systems. The calculations demonstrating the performance of the final cover system are described in Section 5.5 and included in Appendix D. Figure 5-1 presents the requested plan view of the cell. Details of the stormwater management system are presented in Figures 5-5, 5-6, 5-8, 5-9, and 5-10. The fate of the collected run-off is described in Section 5.
b.	<u>Calculation of Peak Flow:</u> Identify the total run-off volume expected to result from at least a 24-hour, 25-year storm. Describe data sources and methods used to make the peak flow calculation. Provide copies of the calculation. Provide copies of the calculations and data, including appropriate references.	Details of the calculations used to calculate peak flow are presented in Appendix D and in Section 5.5.

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c.	<u>Management of Collection and Holding Units:</u> Describe how collection and holding facilities associated with run-on and run-off control systems will be emptied or otherwise managed expeditiously after storms to maintain system design capacity. Describe the fate of liquids discharged from these systems.	Management and fate of stormwater run-off is presented in Section 5.5
d.	<u>Construction:</u> Provide detailed construction and material specifications for the run-off control systems. Include descriptions of the construction quality control program that will be utilized to assure that construction is in accordance with design requirements.	Construction of the cover system is addressed in Section 6. In addition, the Specifications included in Appendix E, and the Construction Quality Assurance Plans in Appendices F and G address the construction requirements.
e.	<u>Maintenance:</u> Describe any maintenance activities required to assure continued proper operation of the run-off control systems throughout the active life of the unit.	Maintenance issues are addressed in Section 5.5 and in Section 6.4